

## *Lamoria anella* (Denis & Schiffermüller), new to the Netherlands (Lepidoptera, Pyralidae)

by

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**ABSTRACT** — *Lamoria anella* (Denis & Schiffermüller) is reported as new to the Netherlands and, moreover, this capture can be considered as the first reliable record in North-West Europe. A taxonomic study of the characters of *L. anella* and *Melissoblastes zelleri* (De Joannis) showed that both species can only be safely distinguished by the venation of the hind wings and the male genitalia.

Whilst we were looking through Dutch material of the Galleriinae in the Kuchlein collection, two females, captured by B. van Aartsen at Heemskerk (Province of North-Holland) on 22.VII.1963, attracted our attention, mainly because of their wing venation. Closer examination of both specimens made it clear that they belong to *Lamoria anella*, a species, which previously has not been recorded from the Netherlands. One of the females concerned is shown in fig. 1a, a male from France is presented in fig. 1b. To our knowledge, no reliable records of *anella* are known from North-West Europe. Meyrick (1928: 401) supposed that the species has been accounted British, probably only through confusion with *Melissoblastes zelleri* (De Joannis) (= *Melissoblastes bipunctanus* auct.). Beirne (1941: 64) considered an old record from Ireland as almost certainly incorrect. Old German records probably all refer to *zelleri*, which may be the reason that no German captures are mentioned in Hannemann's book (1964: 81). The distribution in Europe is shown in the map of fig. 2. Furthermore, *L. anella* has been reported from southern parts of the Palaearctic region and, moreover, from the Indian region. According to the data of Caradja (1925: 40), *anella* has been found in the latter region mainly in territories adjacent to the Palaearctic region. It must be pointed out that the distribution map is mainly based on data, collected from the literature, in which confusion with related species may occur.

The conditions, under which *anella* was captured, deserve closer attention. In his report for migrating Lepidoptera in the Netherlands in 1963, Lempke (1964: 211) considered the records of very rare species as a remarkable characteristic of that year; two of these species were even captured for the first time, viz. the Noctuids *Acontia luctuosa* (Denis & Schiffermüller) and *Hypena obesalis* (Treitschke). Strikingly, the former species was found by Van Aartsen in the

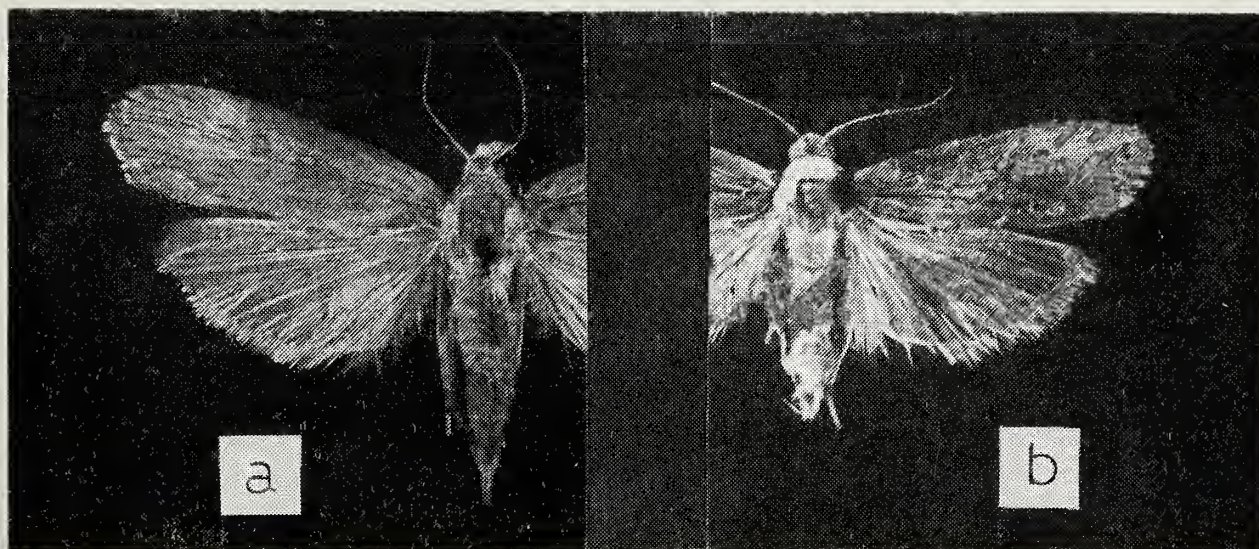


Fig. 1a. *Lamoria anella* (Denis & Schiffermüller) ♀, Heemskerk (the Netherlands), 22.VII. 1963 (B. van Aartsen leg.) (2 ×); b. ♂, St. Jean Cap Ferrat (France), 9.IX.1962 (Kuchlein leg.) (2.7 ×).





Fig. 2. *Lamoria anella* (Denis & Schiffermüller), map of localities in Europe.

same place and on the same date as both specimens of *anella*. Consequently, Van Aartsen's visit to Heemskerk on 22 July 1963 was a highly successful one! It is worth noting that also in other parts of North-West Europe similar observations were made: for example, the Pyralid moth, *Sclerocona acutellus* (Eversmann), in the Palatinate on 17 July 1963 (Heuser, Jöst & Roesler, 1971: 76-77).

Therefore, conditions in 1963 must have been highly favourable for the migration to North-West Europe of some species, which have been recorded as resident in South and South-East Europe. To these species belongs *Lamoria anella* which, consequently, may be considered as an occasional migrant in North-West Europe.

In this region *Lamoria anella* can only be confused with *Melissoblyptus zelleri*. Undoubtedly, there is much confusion because *anella* and *zelleri* cannot be distinguished with certainty on the ground of colour and markings of the wings. These characters show a close resemblance in both species and, moreover, are extremely variable. *L. anella* can, however, easily be distinguished from *zelleri* by venation of the hind wings (fig. 3b and e). In *anella* the hind wings possess veins 3, 4 and 5, whereas in *zelleri* vein 4 is absent. The venation of the fore wings provides less reliable characters for distinction because of its variability. In the fore wings of *anella*, vein 7 arises either from the stalk of veins 8 and 9, or together with vein 9 from vein 8 (fig. 3a). The length of the stalk of veins 8 and 9 varies considerably and, exceptionally, vein 9 can even be absent (fig. 3c). We call the latter form of *anella*, *nona-absens* f. nov. (holotype: ♀ from St. Jean Cap Ferrat, Dépt. Alpes Maritimes, France, 9.IX.1962, coll. Kuchlein).

In the fore wings of *zelleri* vein 9, which is always present, arises generally from the stalk of veins 7 and 8 (fig. 3d). In some specimens of *zelleri*, however, a configuration of the veins 7, 8 and 9 occurs, similar to that of *anella* (fig. 3f). We propose for this form of *zelleri* the name *pseudoanella* f. nov. (holotype: ♀ from Oostvoorne, province of South-Holland, the Netherlands, 15.VII.1964, coll. J. v. d. Made, D. A. Vestergaard & R. Vis).

In their manuals, Meyrick (1928: 401) and Hering (1932: 258) gave the shape of the fore wing as a distinguishing character: it should be broader in *anella* than in *zelleri*. Though the value of the quotient maximum length to maximum width of the fore wings shows significant differences between series of the two species, nevertheless there is a certain overlap between the two species. Therefore, this character does not hold for all specimens. A number of characters is given in the literature (e.g. Hampson, 1917: 37.50), referring to the head and its appendices. From the material studied, it appeared that:

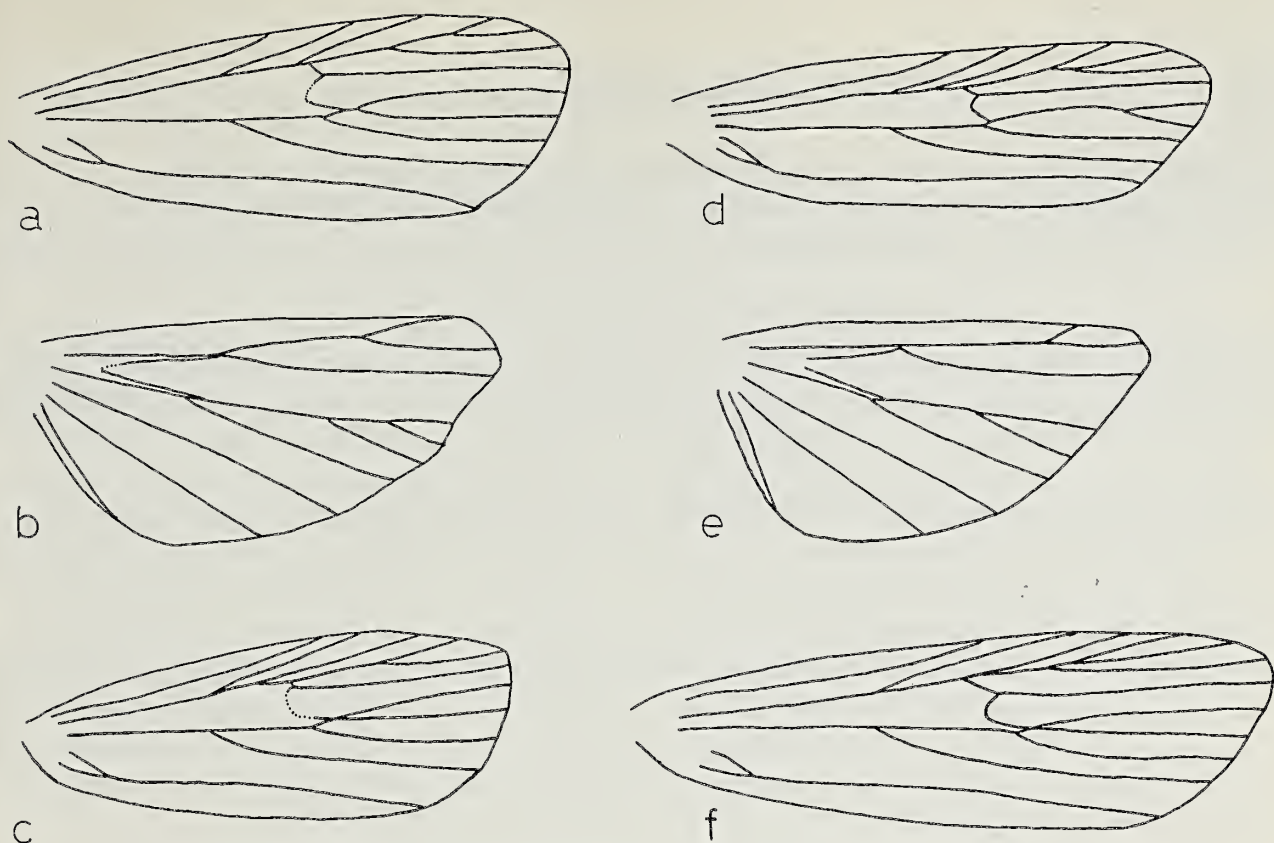


Fig. 3a. *Lamoria anella* (Denis & Schiffermüller), neuration of the fore wing; b. venation of the hind wing; c. *f. nona-absens* nov., neuration of the fore wing; d. *Melissoblaptēs zelleri* (De Joannis), neuration of the fore wing; e. venation of the hind wing; f. *f. pseudoanella* nov., neuration of the fore wing.

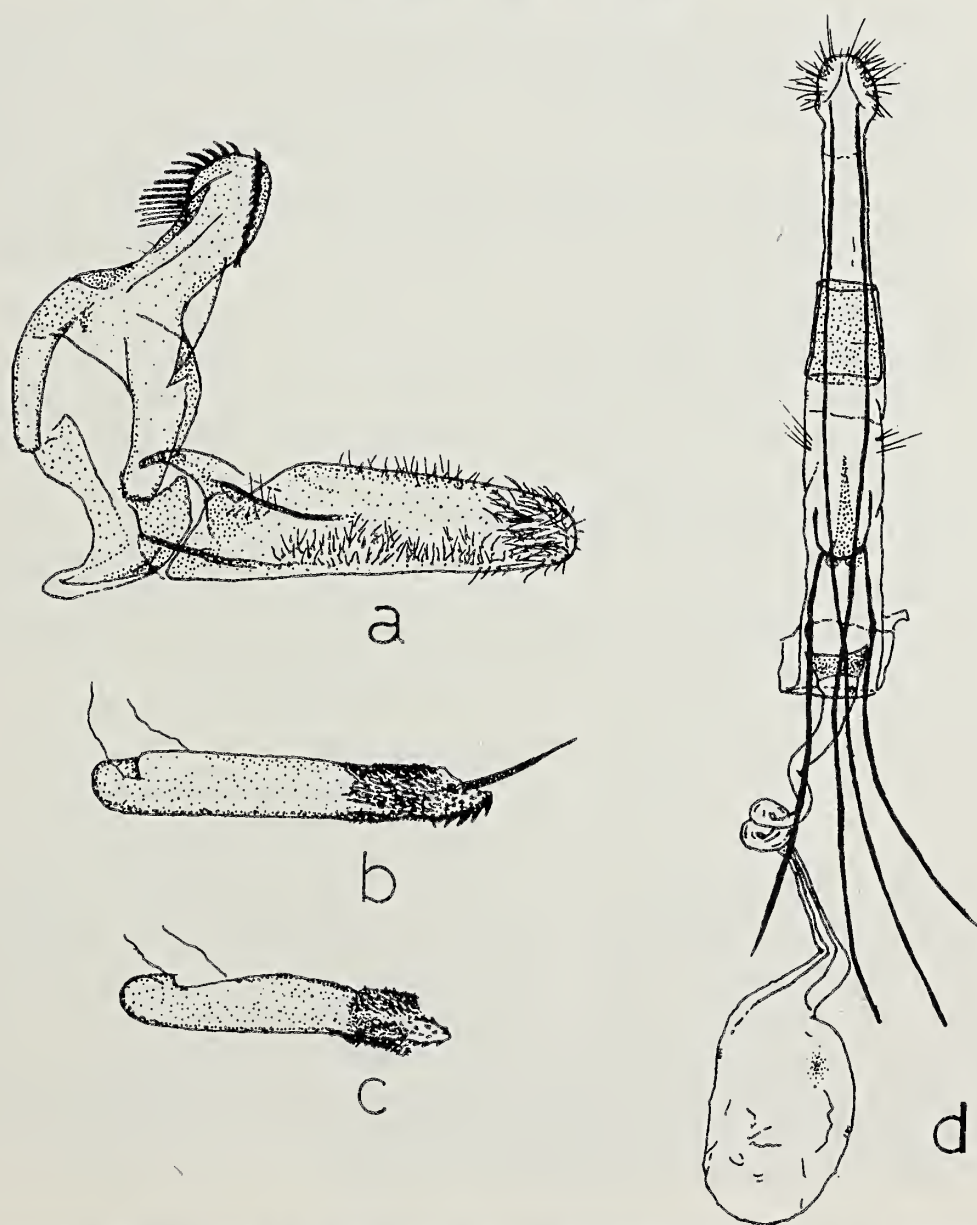


Fig. 4a. *Lamoria anella* (Denis & Schiffermüller), male genitalia (20 ×); b. aedeagus (20 ×); c. *Melissoblaptēs zelleri* (De Joannis), aedeagus (20 ×); d. female genitalia (9.6 ×).



- a. the proboscis of *anella* is somewhat shorter and more slender than that of *zelleri*;
- b. the labial palps of the females of *anella* are shorter than those of the females of *zelleri*. In the males no difference in size of the labial palps could be observed.

In practice, however, the characters referring to the head are not very useful for the identification of both species. They can easily be distinguished from the male genitalia (fig. 4a, b and c). In both species many small cornuti are present. However, the aedeagus of *anella* is easily recognized by the presence of a long and erect spine. Such larger cornuti are absent in *zelleri*.

In the female genitalia (fig. 4d) of both species, which are very similar, the bursa copulatrix is delicately scobinate. Moreover, sclerotization of an oval-shaped cluster of the minute points on the bursa may occur, which results in a rasplike bursa surface (the signum). These structures are not easy to find, especially in *zelleri*.

Data on the early stages of *anella*, published so far, show a fascinating variety of life histories. The larvae are reported from the nests of the wasps *Vespula sylvestris* (Scopoli) and *Polistes gallicus* (Linnaeus) and from the nests of bees. Moreover, they have been bred with the anthidia of Compositae and may live at the roots of *Ammophila arenaria* (Linnaeus). The latter record, however, almost certainly refers to *zelleri*. It is clear that detailed studies of the early stages of *anella* are urgently needed.

#### REFERENCES

- Beirne, B. P., 1941. A list of the Microlepidoptera of Ireland. — *Proc. R. Ir. Acad.*, (B) 47: 53-147.
- Caradja, A., 1925 Ueber Chinas Pyraliden, Tortriciden, Tineiden nebst kurze Betrachtungen, zu denen das Studium dieser Fauna Veranlassung gibt. — *Memle Sect. Stiint. Acad. rom.*, (3) 3 (7): 1-131, 2 pls.
- Hampson, G.F., 1917. A Classification of the Pyralidae, subfamily Gallerianae. — *Novit. zool.*, 24: 17-58.
- Hannemann, H. J., 1964. Kleinschmetterlinge oder Microlepidoptera, II. Die Wickler (s.l.) (Cochylidae und Carposinidae). Die Zünslerartigen (Pyraloidea). — *Tierwelt Dtl.*, 50: I—VIII, 1—401, pl. 1—22.
- Hering, M., 1932. Die Schmetterlinge nach ihren Arten dargestellt. — *Tierwelt Mitteleur.*, (6) 3 (Ergänz. Band): 1—545.
- Heuser, R., H. Jöst & R. Roesler, 1971. Die Lepidopteren-Fauna der Pfalz, A. Systematisch-chorologischer Teil, V; die Zünsler. — *Mitt. Pollichia Pfälz. Ver. Naturk. Natschutz*, 18: 11—85.
- Lempke, B. J., 1964. Trekvinders in 1963. — *Ent. Ber., Amst.*, 24: 203—214.
- Meyrick, E., 1928. *A revised Handbook of British Lepidoptera*: 1—914. — Watkins & Doncaster, London.
- Pierce, F. N. & J. W. Metcalfe, 1938. *The Genitalia of the British Pyrales with the Deltoids and Plummes*: I—XIII, 1—69, pls. 1—29. — Private ed., Oundle.

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DOROS CONOPSEUS (FABRICIUS) IN FRIESLAND GEVANGEN (DIPTERA, SYRPHIDAE). Tijdens de Zomerbijeekomst van onze vereniging te Rijs in Gaasterland ving ik op zondag 12 juni 1977 een prachtige zweefvlieg, die na determinatie door Volkert van der Goot een vrouwtje van *Doros conopseus* (Fabricius) bleek te zijn. Volgens de tabel van V. van der Goot (4e dr., 1970) is deze vlieg gevangen in (Zierikzee), (Arnhem), (Laag-Soeren), Vlodrop, Hilversum, Venlo, Winterswijk, Den Dolder, Udenhout, Oploo, Gulpen, Gerendal, Eindhoven, Savelsbos, Otterlo. Graag zou ik nog andere vindplaatsen vernemen.

J. E. de Oude, Snijlaan 22, 's-Gravenhage 2023.